



IPIFF Brussel
November 2024

Technical update on
today's possibilities.

About the speaker

- Known as the ‘Fly-ing Dutchman’
 - Bob Holtermans
 - Born and raised in The Netherlands
- Family:
 - 3 children, 1 wife
- Entrepreneur
 - Since 2004
 - Made first BSF song?
 - Founder and owner of Insect Engineers



We are **one partner**, for all your process steps.
We provide solutions in BSF Farming.



1
PARTNER

**TURNKEY
BSF FARMING SUPPLIES**

COMPLETE

1 BREEDING SYSTEMS

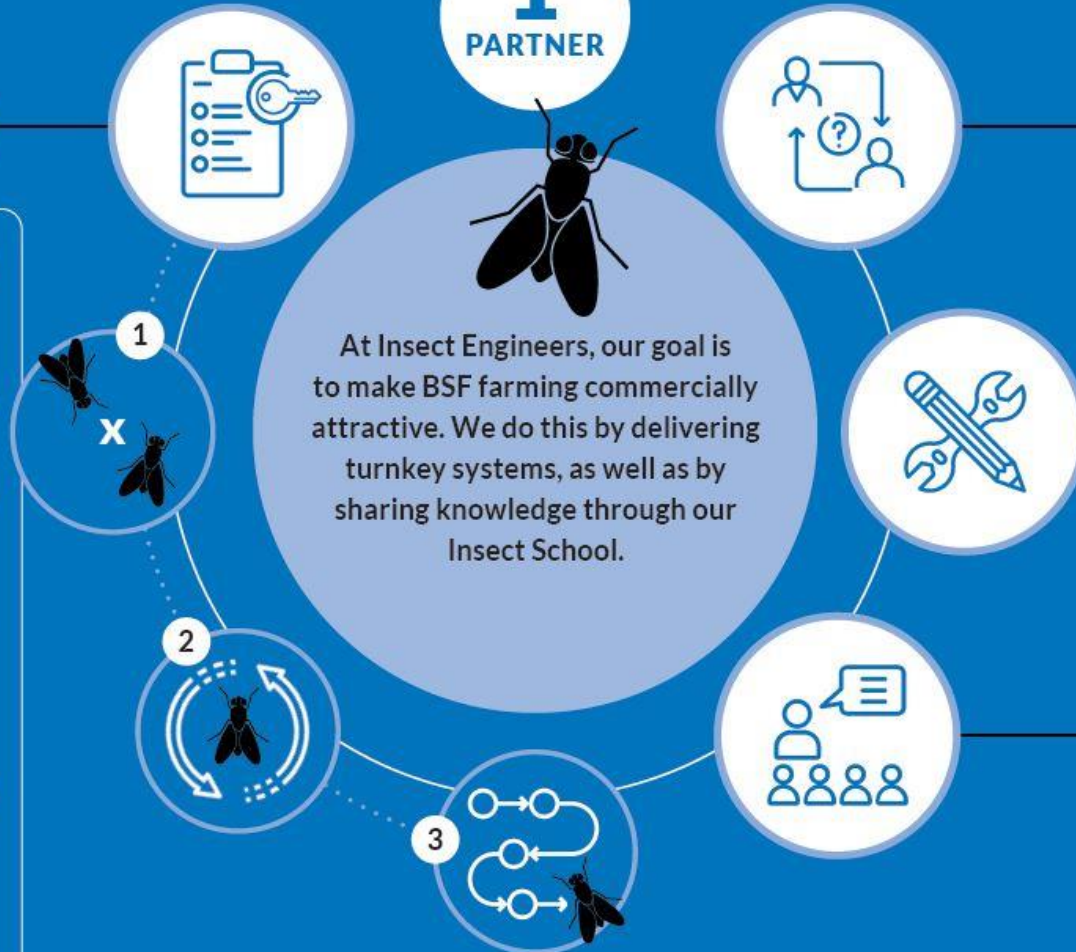
Growing flies and producing eggs.
This includes buildings, climate
controls, love cages, machinery, etc.

2 PRODUCTION SYSTEMS

Feeding and fattening the larvae
using waste streams. For this we
use our unique ZOEM rack system.
We supply buildings, climate
controls, ZOEM racks, ZOEM
machines, etc.

3 PROCESSING EQUIPMENT

From separating the larvae from
the frass to processing the larvae
into insect protein meal and oil.



CONSULTANCY

ENGINEERING

TRAINING

Both in technological aspects and
growing. We do this on-site and at
our Insect School.





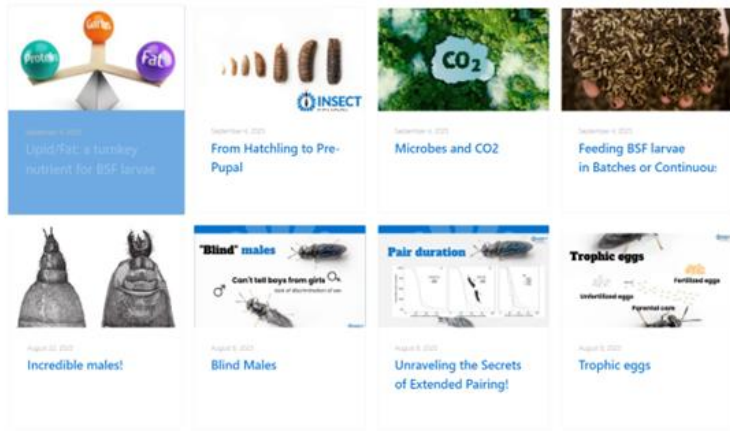
INSECT SCHOOL

FOUNDED BY INSECT ENGINEERS

Meeting place for the industry



Knowledge platform

Research & testing facility



www.insectschool.com





INSECT ENGINEERS

Precision Breeding



ZOEM
(rearing)



www.insectengineers.com

Processing



Insect Engineers

Turnkey Projects – Choice of building

Round-shaped buildings



Special BSF sandwich panels



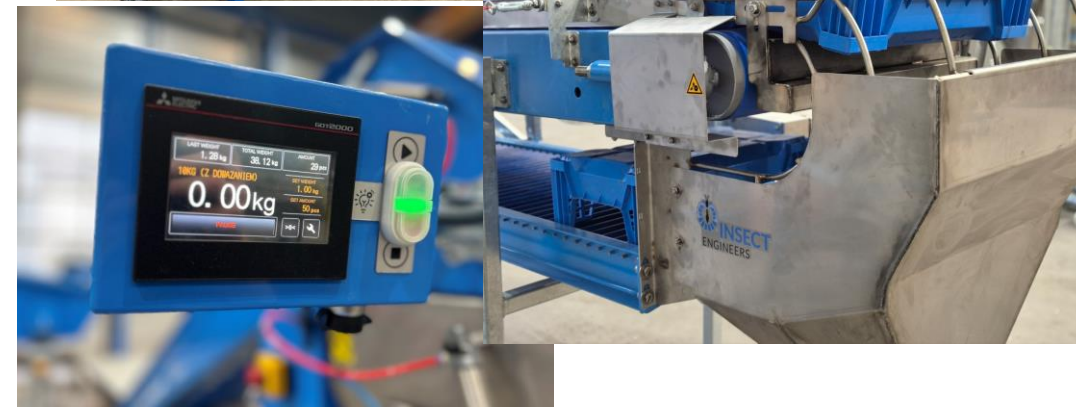
Insect Engineers

Turnkey Projects - Breeding

Highly controlled environment



Machinery



Movie on next page.

Insect Engineers

Turnkey Projects - Breeding

Highly controlled environment

Machinery



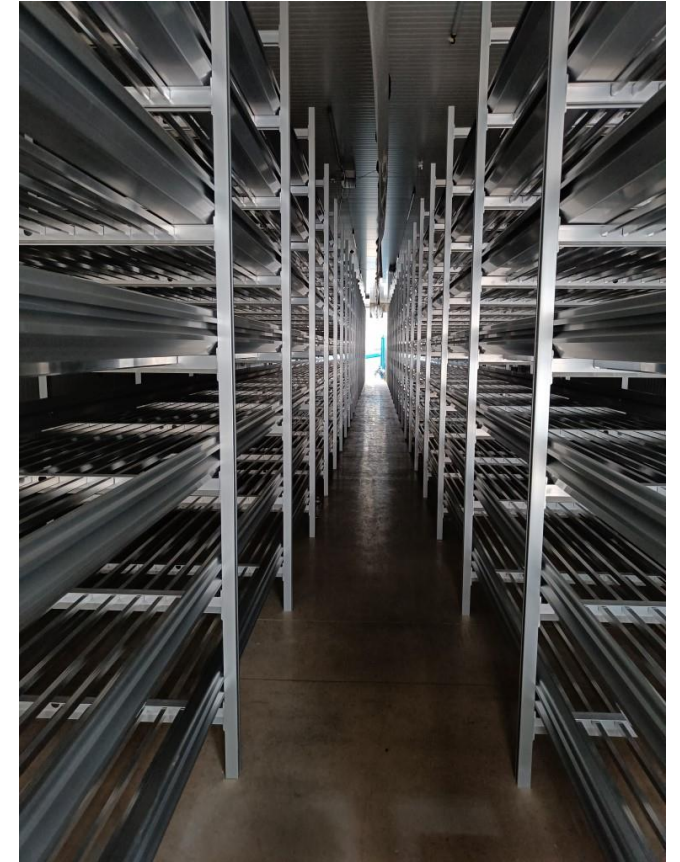
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Turnkey Projects - Production

ZOEM system



ZOEM racks - the answer to crates



Insect Engineers

Turnkey Projects - Production

ZOEM system



Machinery



Movie on next page.

Insect Engineers

Turnkey Projects - Production

ZOEM system

Machinery



Insect Engineers

Turnkey Projects - Production

Harvesting

Machinery



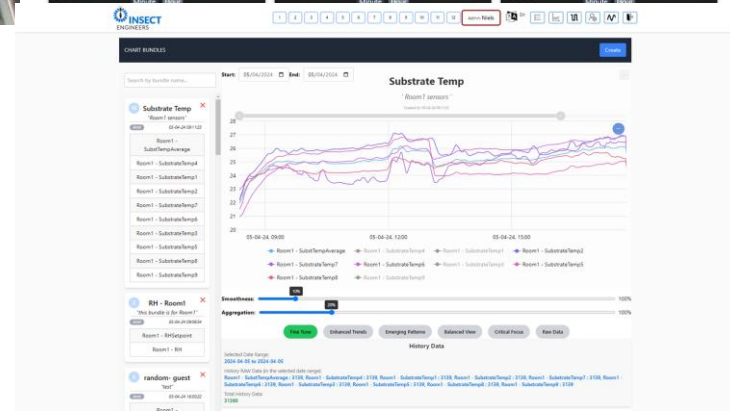
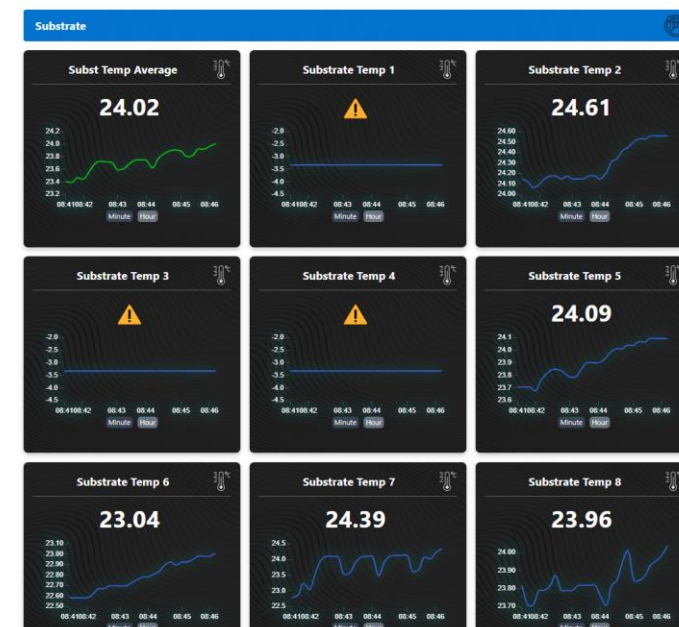
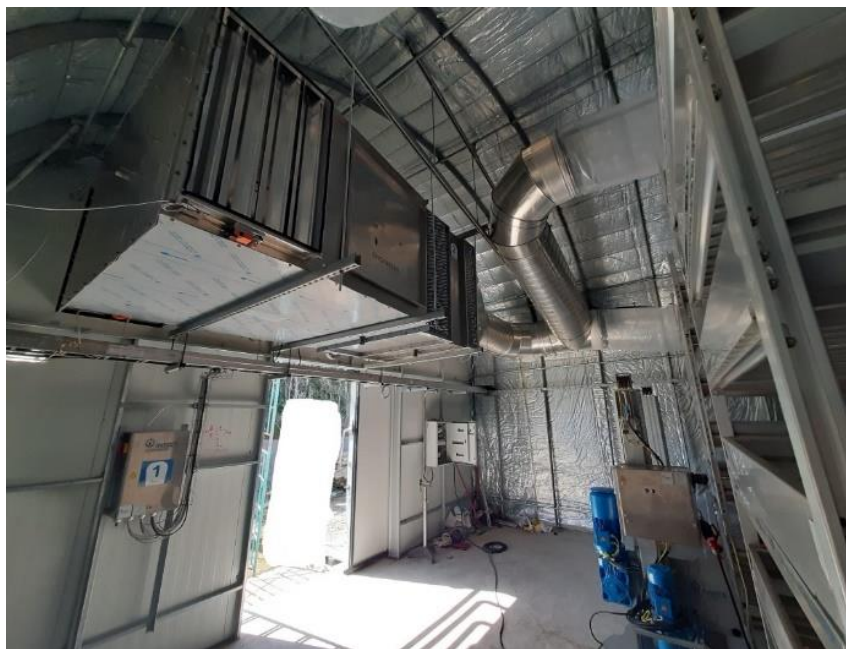
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Turnkey Projects - Production

ZOEM system



Climate controlled environment



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Turnkey Projects - Production

ZOEM system

Unique features



Mixing during production.



Multiple feed during production.



Automatic watering during production.

Movie on next page.

Insect Engineers

Turnkey Projects - Production

ZOEM system

Unique features



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Turnkey Projects - Processing

Sieving



Making end products



Insect Engineers

Turnkey Projects - Processing

Frass drying



How it works

The Insect Engineers frass drying tunnel works with the following steps:

1. With pipes in the ground air will be blown through the frass.
2. The air will bring oxygen in the frass and this will start a composting reaction in the frass.
3. Temperature will raise to 60 to 75 degrees Celsius.
4. Because the temperature raises more water will be evaporated.
5. The frass dries.

All controlled with Insect Engineers software.

Insect Engineers

Turnkey Projects - Processing

Odour and ammonia control with a biobed



On pilot and large scale



Contact

“Bye bye gotta fly!”

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